Amendment to the Claims

Claims 1-27 (Canceled)

28. (Currently amended) ~~A~~ The transgenic mouse of claim 36~~whose genome comprises a heterozygous disruption in a CASH gene~~, wherein the transgenic mouse exhibits increased sensitivity to pain and increased susceptibility to seizure, relative to a wild-type mouse.

29. (Previously presented) The transgenic mouse of claim 28, wherein the transgenic mouse responds more quickly to a thermal stimulus than a wild-type mouse.

30. (Previously presented) The transgenic mouse of claim 28, wherein the transgenic mouse requires a lower dose of metrazol to reach characteristic seizure stages than does a wild-type mouse.

31. (Currently amended) A method of producing a transgenic mouse of claim 35~~whose genome comprises a disruption in a CASH gene~~, the method comprising:

a) introducing into a mouse embryonic stem cell a targeting construct capable of disrupting a CASH gene;

b) introducing the mouse embryonic stem cell into a blastocyst;

c) implanting the resulting blastocyst into a pseudopregnant mouse, wherein said pseudopregnant mouse ~~gives birth~~generates ~~to~~ a chimeric mouse; and

d) breeding the chimeric mouse to produce the transgenic ~~mouse whose genome comprises a heterozygous disruption in the CASH gene;~~

~~wherein the transgenic mouse exhibits increased sensitivity to pain and increased susceptibility to seizure, relative to a wild-type mouse~~.

Claim 32 (Canceled)

33. (Currently amended) A method of identifying an agent capable of modulating activity of a CASH gene or CASH gene expression product~~pain sensitivity~~, the method comprising:

a) administering a putative agent to the transgenic mouse of claim ~~28~~35; ~~and~~

b) administering the agent to a wild-type control mouse;

c) comparing a physiological response of the transgenic mouse with that of the control mouse, wherein said physiological response is a change in pain sensitivity and/or susceptibility to seizure;

wherein a difference in the physiological response between the transgenic mouse and the control mouse is an indication that the agent is capable of modulating activity of the target gene.

~~b)determining whether the putative agent has an effect on pain sensitivity in the transgenic mouse~~.

Claim 34 (Canceled)

35. (New) A transgenic mouse whose genome comprises a null endogenous CASH allele, said null allele comprising exogenous DNA; said exogenous DNA comprising a gene encoding a visible marker where said marker is capable of expression in the brain.
36. (New) The transgenic mouse of claim 35 wherein said mouse is heterozygous for said null allele.
37. (New) The transgenic mouse of claim 35 wherein said mouse is homozygous for said null allele.
38. (New) The transgenic mouse of claim 35 wherein said exogenous DNA further comprises a gene encoding a selection marker.
39. (New) The transgenic mouse of claim 38 wherein said gene is a neomycin resistant gene.
40. (New) The transgenic mouse of claim 35 wherein said visible marker is lacZ.